

WHAT IS CLAIMED IS

- 5        1. A system for wireless communications comprising:  
            a hand-held wireless communications device;  
            an antenna coupled to the hand-held wireless  
            communications device, the antenna configured to radiate  
            with greater field intensity over an area of less than 360  
            degrees of arc; and  
            wherein the antenna is oriented such that the area of  
10     less than 360 degrees of arc is in the direction away from a  
            head of a user of the hand-held wireless communications  
            device.
- 15     2. The system of claim 1 wherein the patch antenna is  
            provided so as to filter the radiated signal by radiating  
            the radiated signal within a narrow, predetermined band.
- 20     3. The system of claim 1 wherein the antenna is a  
            patch antenna that is configured to radiate with greater  
            field intensity over an area of less than 360 degrees of  
            arc.
- 25     4. The system of claim 1 wherein the antenna is a  
            loop antenna that is configured to radiate with greater  
            field intensity over an area of 180 degrees of arc.
- 30     5. The system of claim 1 further comprising a receive  
            antenna coupled to the hand-held wireless communications  
            device, wherein the receive antenna has an orthogonal field  
            of reception relative to the antenna.

6. The system of claim 1 further comprising a receive antenna coupled to the hand-held wireless communications device, wherein the receive antenna is a patch antenna.

5       7. The ~~system~~ of claim 1 wherein the impedance of the antenna is matched to the impedance of a power amplifier of the hand-held ~~wireless~~ communications device.

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8. A system for wireless communications comprising:  
a hand-held wireless communications device;  
a transmit antenna coupled to the hand-held wireless  
communications device; and  
a receive antenna coupled to the wireless  
communications device.

9. The system of claim 8 wherein the hand-held  
wireless communications device is a cellular telephone.

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10. The system of claim 8 wherein the transmit antenna  
has a transmit field that is orthogonal to the reception  
field of the receive antenna.

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11. The system of claim 8 wherein the transmit antenna  
and the receive antenna are each patch antennas, and are  
each contained within a housing of the hand-held wireless  
communications device.

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12. The system of claim 8 wherein the transmit antenna  
and the receive antenna are each patch antennas, and are  
each contained within an integrated circuit package.

13. A method for transmitting and receiving wireless communications comprising:

transmitting electromagnetic radiation carrying encoded data in a first direction;

5 receiving electromagnetic radiation carrying encoded data from a second direction; and

wherein the first direction is different from the second direction.

10 14. The method of claim 13 wherein transmitting electromagnetic radiation carrying encoded data in a first direction further comprises orienting the transmitted electromagnetic radiation such that it is directed away from a user.

15 15. The method of claim 13 wherein orienting the transmitted electromagnetic radiation such that it is directed away from the user comprises holding a cellular telephone handset such that the transmitted electromagnetic 20 radiation is directed away from the user's head.

16. The method of claim 13 wherein the first direction is orthogonal to the second direction.

17. A system for cellular communications comprising:  
a plurality of service cells, each service cell having  
an associated base station;  
one or more handheld wireless communications devices  
5 having at least one directional antenna; and  
wherein the plurality of service cells are coordinated  
to provide communications services to the one or more  
handheld wireless communications devices when each device  
changes the orientation of its associated directional  
10 antenna.

18. The system for cellular communications of claim 17  
wherein each handheld wireless communications device has a  
patch antenna that is used to transmit signals.

19. The system for cellular communications of claim 17  
wherein each handheld wireless communications device has a  
patch antenna that is used to receive signals.

20. The system for cellular communications of claim 17  
wherein each handheld wireless communications device further  
comprises:

a transmit patch antenna that is used to transmit  
signals; and

25 a receive patch antenna that is used to receive  
signals.

21. The system for cellular communications of claim 17  
wherein each handheld wireless communications device further  
comprises:

5           a patch antenna that is used to transmit signals; and  
              a monopole antenna that is used to receive signals.

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